Four-Channel Filter Combiner

At the typical crossover frequencies of 225 and 500 MHz, use the crossover loss specification in the link budget. It lists 5 dB minimum, 6 dB typical and 7 dB maximum.

The four RF inputs carry their frequency ranges on the housing. Each input has a separate +15 V feed rated to withstand 500 mA. The shared output is marked OUT.

RF Performance

Parameter	Value
Passband B1	30–80 MHz
Passband B2	110–225 MHz
Passband B3	225–500 MHz
Passband B4	500–1350 MHz
Passband Insertion Loss	≤ 2 dB
VSWR	≤ 2
Crossover frequencies	225 MHz / 500 MHz (Typical)
Crossover loss	5 dB (Minimum) · 6 dB (Typical) · 7 dB (Maximum) (At the crossover points)

Power and Temperature Ratings

Parameter	Value
Power Handling	1 W (Guaranteed by design)
Operating Temperature	–40...+70 °C (Guaranteed by design)
Storage Temperature	–55...+85 °C (Guaranteed by design)
Voltage feed at each RF input	+15 V
Current withstand at each feed	500 mA
Supply feed hardware	Feed-through capacitor with grounding tab

Mechanical and Interface Specifications

Parameter	Value
RF Interface	SMA-K
RF Impedance	50 Ω
Common port	OUT
Port markings and frequency range	IN 30–80, IN 110–225, IN 225–500, IN 500–1350 (MHz)
Outline dimensions	144 × 65 × 20 mm (Excluding connectors)

Mechanical and Interface Specifications

Parameter	Value
Mounting hole pattern	4 through holes, Ø3.5 mm
Connector material	Stainless steel
Housing material	5A06 aluminum

Assembly and Integration

Do not immerse the filter in cleaning solution. Consult before ordering if the temperature of the complete unit will exceed 125 °C.

Document notice

Specifications are subject to revision. Before design release, confirm the current document revision and product-specific requirements with LCRF. The approved quotation and order documentation define the supplied configuration.